

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	
)	
v.)	Case No. 4:19 CR 980 HEA (JMB)
)	
HAITAO XIANG,)	
)	
Defendant.)	

MEMORANDUM, REPORT, AND RECOMMENDATION OF MAGISTRATE JUDGE¹

Currently before the Court is Defendant Haitao Xiang's Motion for Bill of Particulars. (ECF No. 58) The government opposes the motion. (ECF No. 62) On August 5, 2020, the Court held a hearing to receive oral argument on the motion. Xiang was present² with his attorneys Eric Selig, Matthew Ridings, Steven Block, and Natalie Gabrenya. The government was represented by Assistant United States Attorneys Gwen Carroll and Matthew Drake. Also appearing was Michael Martinich-Sauter, who represents Bayer US, LLC, and the Climate Corporation, who are interested parties and owners of the information that is at the heart of this criminal trade secret case. For the reasons outlined below, the undersigned recommends that Xiang's Motion for Bill of Particulars be denied.

RELEVANT PRODECURAL AND FACTUAL BACKGROUND

According to the Indictment, Xiang is a citizen of the People's Republic of China who was formerly a permanent legal resident of the United States. While in the United States, Xiang

¹ Pretrial matters have been referred to the undersigned United States Magistrate Judge, under 28 U.S.C. § 636(b).

² All parties appeared via video conference, pursuant to the CARES Act. Xiang consented to conducting the hearing via video conference.

worked for Monsanto and The Climate Corporation (TCC), a subsidiary of Monsanto.³ While employed by Monsanto, Xiang reportedly worked on a “component of a digital, on-line farming software platform ... referred to as a Nutrient Optimizer.” (ECF No. 16 at ¶ 5. The Indictment alleges that “Monsanto and TCC considered the Nutrient Optimizer to be confidential, proprietary information and a highly valuable trade secret as defined in 18 U.S.C. § 1839(3).” (ECF No. 16 at ¶ 15) Broadly speaking, the Indictment alleges that Xiang committed eight separate federal felonies related to the Nutrient Optimizer trade secret. Count One charges him with conspiracy to commit economic espionage, in violation of 18 U.S.C. § 1831(a)(5). Counts Two through Four allege substantive counts of economic espionage and attempted economic espionage, in violation of 18 U.S.C. §§ 1831(a)(1), (a)(3) and (a)(4). Count Five charges Xiang with conspiracy to commit theft of trade secrets, in violation of 18 U.S.C. § 1832(a)(5). Counts Six through Eight allege substantive counts of theft of trade secrets and attempted theft of trade secrets, in violation of 18 U.S.C. § 1832(a)(1), (a)(2), (a)(3), and (a)(4).

For purposes of resolving Xiang’s Motion for Bill of Particulars, the distinctions between the various counts is not particularly important. What is important is the trade secret at issue. As noted above, the Indictment identifies the trade secret at issue as “the Nutrient Optimizer.” The Indictment further describes the Nutrient Optimizer as comprising six “categories or software modules of proprietary technology” namely:

a. A crop growth module, which simulated plant growth and nutrient uptake that was business, scientific, technical, economic, or engineering information. It included patterns, plans, compilations, program devices, formulas, designs, methods, techniques, processes, procedures, programs, or codes;

b. A surface hydrology module, which described moisture dynamics between precipitation and infiltration that was business, scientific, technical,

³ Monsanto is now owned by Bayer. For simplicity, the Court will refer to Xiang’s former employer as Monsanto.

economic, or engineering information. It included patterns, plans, compilations, program devices, formulas, designs, methods, techniques, processes, procedures, programs, or codes;

c. A soil moisture module, which simulated water availability and distribution in the soil that was business, scientific, technical, economic, or engineering information. It included patterns, plans, compilations, program devices, formulas, designs, methods, techniques, processes, procedures, programs, or codes;

d. A surface and soil temperature module, which simulated the temperature at the top of the soil surface as well as subsurface soil temperatures that was business, scientific, technical, economic, or engineering information. It included patterns, plans, compilations, program devices, formulas, designs, methods, techniques, processes, procedures, programs, or codes;

e. A soil chemistry module; which simulated the nutrient movement and associated processes within an agricultural soil that was business, scientific, technical, economic, or engineering information. It included patterns, plans, compilations, program devices, formulas, designs, methods, techniques, processes, procedures, programs, or codes; and

f. A tillage, harvest, and crop residue module, which described how farmer practices might impact the soil system and other modules that was business, scientific, technical, economic, or engineering information. It included patterns, plans, compilations, program devices, formulas, designs, methods, techniques, processes, procedures, programs, or codes.

(ECF No. 16 at ¶ 15)

Through discovery, and pursuant to a substantial protective order, the government disclosed an 86-page document that the encompasses the trade secret at issue in this case. The parties have referred to this document as the Nutrient Optimizer. At the August 5, 2020, hearing on Xiang's motion, the government represented that the above-noted six categories/modules are, in fact, the trade secret at issue and are described in detail in the 86-page document.

DISCUSSION

I. Summary of Arguments

Xiang contends that he is entitled to a bill of particulars that would compel the government to specify what information within the 86-page Nutrient Optimizer document is

actually a trade secret. The government counters that the trade secret at issue in this case is a combination of information, not any discrete item. Thus, according to the government, the 86-page document describes the trade secret. The government argues that “[t]he 86-page Nutrient Optimizer is an internal technical document that sets forth in detail the methodology for designing a proprietary predictive algorithm that advises farmers on the optimal application of certain agricultural inputs based on both plot-specific and climate-specific variables.” (ECF No. 62 at 2) The government further explains that, “the purpose of the Nutrient Optimizer was to describe the research conclusions behind the algorithm development and to enable TCC’s scientists to convey the technical details of how the predictive algorithm would operate to programmers, who would then translate those technical details into the code of the commercially available software platform.” (ECF No. 62 at 3)

In the Indictment, in its opposition to Xiang’s Motion for Bill of Particulars, and at the August 5th hearing, the government has taken the position that the Nutrient Optimizer is a combination trade secret that comprises the following six specific modules: (a) a Crop Growth Module; (b) a Surface Hydrology Module; (c) a Soil Moisture Module; (d) a Surface and Soil Temperature Module; (e) a Soil Chemistry Module; and (f) a Tillage, Harvest, and Crop Residue Module. (See, e.g., ECF No. 16 at ¶ 15, ECF No. 62 at 3-4)

II. Legal Principles and Analysis

“If a defendant believes that an indictment does not provide enough information to prepare a defense, then he or she may move for a bill of particulars.” United States v. Livingstone, 576 F.3d 881, 883 (8th Cir.) (citing Fed. R. Crim. P. 7(f)), cert. denied, 558 U.S. 1099 (2009). “The purpose of a bill of particulars is to inform the defendant of the nature of a charge with sufficient precision to enable [her] to prepare for trial and to avoid or minimize the

danger of surprise at trial.” Id. It is well established that “a bill of particulars is not a discovery device to be used to require the government to provide a detailed disclosure of the evidence that it will present at trial.” Id.; see also United States v. Huggans, 650 F.3d 1210, 1220 (8th Cir. 2011) (quoting same), cert. denied, 565 U.S. 1202 (2012).⁴

The allegations in the Indictment involve a single trade secret, the Nutrient Optimizer. The government has referred to this trade secret as a combination of the specific modules identified in the Indictment and detailed in the 86-page document. The fundamental issue pending before the Court is whether the Indictment and the 86-page document provided in discovery enable Xiang to adequately prepare for trial and minimize the risk of surprise as to the trade secret at issue.

Having considered the foregoing principles, the Indictment, and the status of discovery, the undersigned recommends that Xiang’s Motion for Bill of Particulars be denied. The Indictment in this matter includes an exceptional level of detail regarding the alleged crimes

⁴ Title 18, United States Code, Section 1839(3) defines the term “trade secret” as follows:

The term “trade secret” means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if—

(A) the owner thereof has taken reasonable measures to keep such information secret; and

(B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information.

18 U.S.C. § 1839(3). Congress modified the definition of the term “trade secret” in May 2016. Each of the counts in the Indictment alleges acts beginning at a date unknown and continuing until on or about June 10, 2017. Therefore, the current definition of the term applies.

committed by Xiang. This is not a case of a “bare bones” indictment that merely mimics the language of the charging statutes. For example, the Indictment alleges numerous facts and circumstances related to Xiang’s employment, his access to the Nutrient Optimizer trade secret, the steps that Monsanto took to protect the trade secret from public disclosure, Xiang’s knowledge of the trade secret, and the steps Xiang allegedly used to take or attempt to take the trade secret with him to China. It does not appear that Xiang challenges the level of detail in the Indictment except for the identification of the trade secret which he is alleged to have taken and attempted to have taken.

The undersigned is not persuaded that this is a case in which due process or other valid concerns should sway the Court to use its discretion and order the government to provide a bill of particulars to further specify the trade secret at issue. First, the matter involves only one trade secret—the Nutrient Optimizer. Second, the government has acknowledged that the Nutrient Optimizer, as it relates to this litigation, comprises a combination. That is, the trade secret does not consist of a single item of information or code, or a secret ingredient. Rather, the Nutrient Optimizer reflects a combination of six modules. Those six modules are identified with a fair degree of specificity in paragraph 15 of the Indictment.

Furthermore, to the extent the description of the six modules in the Indictment is general, the government has provided Xiang’s counsel with a copy of the 86-page document that the government asserts describes the Nutrient Optimizer. While that document is sealed, the undersigned has reviewed it and finds that it provides additional, specific details regarding the six modules that are generally described in the Indictment. Thus, Xiang’s attorneys have been

provided sufficient information to allow them to ascertain the trade secret at issue and prepare a defense.⁵

The foregoing conclusion that a bill of particulars is not necessary is consistent with other cases that have considered similar issues in trade secret / economic espionage cases.

For example, United States v. Liew et al., 2013 WL 2605126 (N.D. Cal. June 11, 2013) alleged that the defendants therein violated 18 U.S.C. § 1831 (economic espionage) relating to trade secrets pertaining to “chloride-route production of titanium dioxide (‘TiO₂’).” Id. at *1. The Liew defendants sought a bill of particulars relative to two of the trade secrets at issue (referred to therein as Trade Secrets 1 and 5), asserting that the definitions of those two trade secrets were “overly broad.” Id. at *7. The government in Liew provided a 407-page document that described Trade Secret 5. The district court concluded that this discovery, along with a requirement that the government provide the defense with the documents it intends to introduce in its case-in-chief, was sufficient and denied a bill of particulars relative Trade Secret 5. Regarding Trade Secret 1, however, the district court found that the definition was not so well-defined. Thus, the district required the government to “provide a bill of particulars that sets forth ... whether the United States will argue that the Defendants reasonably believed the entire chloride-route process to manufacture TiO₂ was a trade secret or whether I will argue the

⁵ The ongoing Coronavirus pandemic adds an unfortunate and unforeseen layer of complexity to this already complex case. For example, in the present circumstances, defense counsel cannot readily confer with Xiang to discuss the details within the 86-page document. At the August 5, 2020, hearing, the undersigned discussed with the lawyers the possibility of requiring the government to produce early any expert report it might rely on at trial. The undersigned has decided not to impose an early expert disclosure requirement. The government has taken a fairly firm and clear position as to the scope of the trade secret at issue. While it may ultimately be in the government’s best interest to provide any expert reports sooner rather than later, it is not necessary to require early disclosure to address the concerns raised in Xiang’s Motion for Bill of Particulars.

Defendants reasonably believed a subset of the process was a trade secret.” Id. at *8 (emphasis supplied).

In the instant case, the Nutrient Optimizer is described in an 86-page document, which is detailed yet not as voluminous as the 407-page document describing Trade Secret 5 in Liew. Further, in this case, the government has affirmatively taken the position that it will argue that the trade secret at issue is a combination that comprises the six modules alleged in the Indictment and further described in the 86-page document, not a subset of the six modules. Thus, the ambiguous circumstance that necessitated a limited bill of particulars in Liew is not present in this case.

The indictment in United States v. Roberts, 2009 WL 4060006 (E.D. Tenn. Nov. 20, 2009), alleged a conspiracy to steal a trade secret related to “Goodyear’s roll over-ply device.” Id. at *2. Roberts moved for a bill of particulars to require “the government to identify the trade secret information that the roll over-ply down device actually contained.” In response, the government represented that “every part of the roll over-ply down device ... is a trade secret.” Id. at *3 (emphasis supplied). In view of that representation and the allegations in the indictment, the district court denied the motion for a bill of particulars. Id.

The circumstances of Xiang’s case are analogous to those of Roberts in that the government has affirmatively represented that the Nutrient Optimizer trade secret is a combination that comprises all six modules described and documented.

United States v. Groves, 2013 WL 5592911 (W.D. Ky. Oct. 10, 2013), is also instructive. In Groves, the defendants were accused of conspiracy to steal trade secrets belonging to their former employer (White Drive Products, Inc.). Id. at *1. One of the defendants moved for a bill of particulars, “assert[ing] that the indictment and documents already disclosed by the

Government fail to adequately inform [him] of the exact documents that contain trade secrets.”

Id. Accordingly, the defendant requested “an order directing the Government to specify the scope of the trade secrets ... [and] confirm that the trade secrets at issue pertain exclusively to the manufacturing process.” Id. The district court denied the motion. The court acknowledged that the indictment did not list the specific documents that contained the trade secrets at issue. Id. at *2. Nonetheless, the indictment “identifie[d] the dates upon which the crimes were allegedly committed ... [and] the actions [the defendant] is accuse of taking in violation of the statute.” Id. Furthermore, the court noted that the defendant was “adequately apprised of the documents that are alleged to contain the trade secrets ... [in that] the Government ... disclosed 245 pages of information and ... provided [the defendant] with access to the actual documents that are at issue.” Id.

Again, Xiang’s case compares favorably to the situation in Groves. The Grand Jury’s Indictment in this matter provides Xiang with a great deal of detail concerning the charges against him, including dates and the actions he allegedly took in violation of the statutes at issue. Unlike the situation in Groves, the present Indictment specifically identifies the sole trade secret at issue—the Nutrient Optimizer. And, as already explained above, to the extent the description in the Indictment lacks precision, the 86-page document turned over to the defense provides sufficient notice of what the government asserts is the trade secret at issue in this case.

For the foregoing reasons, the undersigned respectfully recommends that the Court deny Xiang’s Motion for Bill of Particulars.

RECOMMENDATION

Accordingly,

IT IS HEREBY RECOMMENDED that Defendant Haitao Xiang's Motion for Bill of Particulars [ECF No. 58] be **DENIED**.

The parties are advised that they have fourteen (14) days in which to file written objections to this Memorandum, Order, and Recommendations, unless an extension of time for good cause is obtained, and that failure to file timely objections may result in a waiver of the right to appeal questions of fact. See Thompson v. Nix, 897 F.2d 356 (8th Cir. 1990); see also 28 U.S.C. § 636(b)(1)(A), Fed. R. Crim. P. 59(a).

This pretrial phase of this complex matter is not yet complete. Accordingly, the trial of this matter will be set by future order of the Honorable Henry E. Autrey, United States District Judge.

/s/ *John M. Bodenhausen*
JOHN M. BODENHAUSEN
UNITED STATES MAGISTRATE JUDGE

Dated this 20th day of August, 2020.